1.1.15 $\underset{[0,1)}{p(t) = \sin(2\pi \cdot 1 \cdot t)}$ $t_k = a + \frac{b-a}{N}k$

a.)

i.) $N=4$: $0 + \frac{1-0}{4}k = \frac{1}{4}k$

$T_4 = \{0, 1/4, 1/2, 3/4, 1\}$

ii.) $N=8$: $0 + \frac{1-0}{8}k = \frac{1}{8}k$

$T_8 = \{0, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1\}$

iii.) $N=16$: $0 + \frac{1-0}{16}k = \frac{1}{16}k$

$T_{16} = \{1/16, 1/8, 3/16, \ldots 1\}$